

REMARKS

Claims 1-16 are pending in the present application, and are rejected. No claims are herein amended.

Claim Rejections - 35 U.S.C. §103

Claims 1-7 and 14-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nishimura (US-5495105) in view of Martin (US-4887721) in further view of Mitsuhiro (JP-4370089).

Claims 11-12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nishimura (US 5,495,105) in view of Martin (US 4,887,721) in further view of Mitsuhiro (JP-4370089).

The Examiner asserts that Applicants arguments filed May 3, 2007 have been considered but are not persuasive. The Examiner particularly asserts that Applicant's focus on "adjusting the laser beam to converge inside a chamber of a collector facing the laser beam emitting aperture located outside the flow path" is disclosed by Mitsuhiro.

The present invention includes the limitation of a laser beam adjusted to converge inside a chamber of a collector, the chamber facing a laser beam emitting aperture, and the flow path interposing between the laser aperture and the chamber in which the beam converges.

The Examiner broadly construes that Mitsuhiro discloses a focused laser beam (7) converging inside a chamber (A) of a collector facing a laser beam emitting aperture (3b) with the flow path interposing there between (Fig. 1).

Applicants respectfully disagree with this rejection and submit that the Examiner has incorrectly characterized Mitsuhiro. In Mitsuhiro, the passage A along which the particles flow and in which the lasers are focused can not reasonably be considered a “chamber of a collector.” That is, the passage A contains a flow path along which particles flow toward collector chambers. The passage itself is not a collector chamber, or even a chamber of a collector. The entire apparatus of Mitsuhiro is a separator, not a collector. The collector chambers are a subset of the separator of Mitsuhiro. Therefore, at best the passage A could be considered a chamber of a separator, not a chamber of a collector.

However, even if the passage A of Mitsuhiro could be reasonably considered a chamber of a collector, the passage A *contains* the flow path, which may be construed to be along the center of the passage A along the laser path. Therefore, since the passage A *contains* the flow path, the flow path could not interpose between the laser aperture and the chamber, since the flow path is *inside* the asserted chamber.

Therefore, Mitsuhiro provides no suggestion with respect to the limitation of a laser beam adjusted to converge inside a chamber of a collector, the chamber facing a laser beam emitting aperture with the flow path interposing therebetween.

With respect to Nishimura et al., Applicants further submit that the Examiner is failing to properly characterize the cited patent. The Examiner characterizes Nishimura et al. as “sorting and recovering fine particles”. Applicants respectfully disagree with this characterization.

Applicants note that Nishimura et al. teaches that a flow of liquid containing floating fine particles is formed in a flow path, and a laser is focused on the liquid flow, whereby the particle

is optically trapped at the irradiating position, thus being stopped against the liquid flow or being slowed by a braking force. The cited patent teaches that the laser is utilized in controlling the spacing of the particles in the flow or in separating the particles.

Thus, the particles are indeed recovered in Nishimura et al., but the particles are not sorted. Rather, the laser arrangement in the cited patent merely ensures a proper spacing between the particles.

Further, the present claims require the selective deflection of the fine particles *in the direction of convergence* of the laser beam. Nishimura et al. includes three laser beams, two of which are parallel, and only one of which (49) has a convergent beam. The laser 49 having the convergent beam is focused to converge directly in the middle of the first segment 43 of the path. Thus, the limitation of “a laser beam adjusted to converge inside a chamber of a collector, the chamber facing a laser beam emitting aperture with the flow path interposing therebetween” is not taught or suggested by Nishimura et al., because it can not reasonably be said that the asserted flow path 43 is interposed between (1) a chamber in which the beam is focused and (2) the laser beam emitting aperture.

Therefore, Applicants submit that any combinations of Nishimura et al. with Martin (US-4887721) and/or Mitsuhiro would not have easily lead one having ordinary skill in the art to arrive at the claimed feature of the present invention, “an apparatus for recovering predetermined fine particles in a chamber of a collector by adjusting the laser beam so as to converge inside the chamber of the collector facing a laser beam emitting aperture with the flow path interposing therebetween”.

Application No. 10/533,109
Attorney Docket No. 052525

Response under 37 C.F.R. §1.116
Response filed October 30, 2007

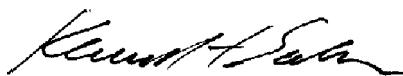
In view of the aforementioned remarks, Applicants submit that that the claims are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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